

# SOLARIS MATERIAL SAFETY DATA

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SOLARIS PRODUCT NAME  
**GREENSWEEP®**  
**LAWN FOOD**  
**27-1-4**

The Solaris Group  
A Division of the Agricultural Group of  
Monsanto Company  
P.O. Box 5008  
San Ramon, CA 94583-0808  
MSDS No. 6050

EMERGENCY PH. NO. (CALL COLLECT) (314) 694-4800

DATE PREPARED: March, 1995

## PRODUCT IDENTIFICATION

Synonyms: None

Chemical Name: Not Applicable, Formulated Product

Analysis:

Total Nitrogen .....	27.0%
Water-Soluble Organic Nitrogen	13.55%
Urea Nitrogen	13.45%
Available Phosphoric acid ( $P_2O_5$ ) .....	1.0%
Soluble Potash ( $K_2O$ ) .....	4.0%

Primary plant nutrient sources: Urea, methylene diurea and tetra potassium pyrophosphate

DOT Proper Shipping Name: Not Applicable

DOT Hazard Class/I.D. No.: Not Applicable

DOT Label: Not Applicable

Reportable Quantity (RQ) Under U.S. CERCLA: Not Applicable

U.S. Surface Freight Classification: Manufactured fertilizer, compounds, N.O.I. liquid

## SARA Hazard Notification

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Not Applicable

Section 313 Toxic Chemical(s): Not Applicable

## Hazardous Chemical(s) Under OSHA Hazard Communication Standard:

The substance listed below, is considered a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200):

Urea, CAS Reg. No. 57-13-6, 10%

## WARNING STATEMENTS

Keep out of reach of Children  
**CAUTION!**  
Do not take internally

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## OCCUPATIONAL CONTROL PROCEDURES

<b>EYE PROTECTION:</b>	Greensweep Lawn Food 27-1-4 does not cause significant irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.		
<b>SKIN PROTECTION:</b>	Greensweep Lawn Food 27-1-4 does not present a significant skin concern requiring special protection.		
<b>RESPIRATORY PROTECTION:</b>	Greensweep Lawn Food 27-1-4 is not likely to present an airborne exposure concern under normal use. Use NIOSH/MSHA approved respiratory protection equipment if needed for mist exposure during unusual handling conditions. Consult respiratory manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or manufacturer. Respiratory protection programs must comply with 29 CFR §1910.134.		
<b>VENTILATION:</b>	Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at source of air contamination, such as open process equipment.		
<b>AIRBORNE EXPOSURE LIMITS:</b>	<b>PRODUCT:</b>	Greensweep Lawn Food 27-1-4 (100% of product):	
		OSHA PEL: None established	ACGIH TLV: None established
		Urea	
		OSHA PEL: None established	ACGIH TLV: None established

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## FIRE PROTECTION INFORMATION

<b>Flash Point:</b>	>200° C
<b>Extinguishing Media:</b>	Use media for exposure fire.
<b>Special Fire Fighting Procedures:</b>	Fire fighters or others who may be exposed to vapors or products of combustion should wear self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly cleaned after use.
<b>Unusual Fire and Explosion Hazards:</b>	None

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## REACTIVITY DATA

<b>Stability:</b>	Shelf life expected to be more than one year. Tests ongoing.
<b>Incompatibility:</b>	Strong acids, reactive metals.
<b>Hazardous Decomposition Products:</b>	Ammonia, carbon dioxide, carbon monoxide, phosphorus oxide and nitrogen oxides.
<b>Hazardous Polymerization:</b>	Will not occur

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## HEALTH EFFECTS SUMMARY

The following information summarizes human experience and results of scientific investigations reviewed by health professionals for hazard evaluation of Greensweep Lawn Food 27-1-4 and development of Precautionary Statements and Occupational Control Procedures recommended in this document.

## EFFECTS OF EXPOSURE

Skin contact is expected to be the primary route of occupational exposure to Greensweep Lawn Food 27-1-4. Occupational exposure to this material has not been reported to cause significant adverse health effects. On the basis of available information, exposure to Greensweep Lawn Food 27-1-4 is not expected to produce significant adverse human health effects when recommended safety precautions are followed.

## TOXICOLOGICAL DATA

Data from laboratory studies conducted by Monsanto with Greensweep Lawn Food 27-1-4 are summarized below:

Oral -	Practically Nontoxic (Rat LD <sub>50</sub> - > 5,000 mg/Kg)
Dermal -	Practically Nontoxic (Rabbit LD <sub>50</sub> - > 5,000 mg/Kg)
Eye Irritation -	Slightly Irritating (rabbit)
Skin Irritation -	Essentially Nonirritating (Rabbit, 4-hr exposure)

## COMPONENTS

Data from the available literature on urea, a component of Greensweep Lawn Food 27-1-4, which has been identified under the criteria of OSHA Hazard Communication Standard (29 CFR 1910.1200) are summarized below:

### Urea

Urea is a normally occurring substance, formed by animals and man during metabolism of protein, and is eliminated in the urine. Prolonged or repeated exposure of skin and eyes may cause slight irritation, redness and itching due to the tendency of urea to draw water from skin. This material is reported by its supplier to cause allergic skin reactions only on very rare occasion. Inhalation of dust from urea has been reported to produce a mild drying effect on the respiratory tract membranes of exposed workers. Swallowing of quantities of urea may cause gastrointestinal disturbances including irritation, nausea, vomiting and diarrhea, and diuresis (increased rate of urine formation).

Animal data for urea include long-term feeding studies in rats and mice. In these published studies, the investigatory concluded there was no carcinogenic effect. Urea was reported to produce genetic effects in certain laboratory studies, though the significance of the results is unclear.

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## PHYSICAL DATA

Appearance: green liquid

Odor: none perceptible

pH: 10.4

Specific Gravity: 1.2940 at 20/15° C

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

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## SPILL, LEAK & DISPOSAL INFORMATION

### SPILL/LEAK:

Observe all protection and safety precautions when cleaning up spills -- see Occupational Control Procedures.

Dike and/or absorb spilled material using absorbent clays or similar material. Collect and dispose of as indicated below.

Flush area with water. Keep out of watersheds and water systems.

### DISPOSAL

Wastes resulting from the use of this product that cannot be chemically reprocessed should be disposed of in a landfill in accordance with applicable Federal, state or local procedures.

Empty container retains vapor and product residue. Observe all label safeguards until container is destroyed. Do not reuse container. Triple rinse container. Then puncture and dispose of in a sanitary landfill or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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DATE: MARCH, 1995

SUPERSEDES: Sept. 1995 (M00015507)

MSDS NO.: 6050

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FOR ADDITIONAL NON-EMERGENCY INFORMATION, CALL: 1-800-225-2683

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